

## Spring 2018 Alaska Assessment Item Types

### Performance Evaluation for Alaska's Schools (PEAKS) English Language Arts (ELA) and Mathematics Assessments and Alaska Science Assessment

*Item types may vary by grade and content area.*

#### **Selected-Response (SR) Items**

Selected-Response (SR) items are an efficient method for measuring a broad range of content and can be used to assess a variety of skills. There are three types of SR items used on the online assessments: Multiple-Choice (MC), Multi-Select (MS), and two-part Evidence-Based Selected Response (EBSR). In all cases, SR items require that students choose the correct answer(s) from a provided list. While students may perform some work directly related to determining the correct answer, they are not required to generate the content of the answer when responding to a selected-response item. An exception to this requirement is short-response/gridded-response items, in which students are required to enter a short alphanumeric response.

### Multiple-Choice (MC)

All Multiple-Choice (MC) items have four answer choices, including three “distractors” (incorrect answers) and one correct answer. Distractors for Mathematics represent common misconceptions, incorrect logic, incorrect application of an algorithm, computational errors, etc. Distractors for English Language Arts (ELA) represent common misinterpretations, unsound reasoning, or casual reading errors, etc. A correct response to an MC item is worth one raw point. MC items are at all grades and in all content areas.

Multiple-Choice items may be linked to, or stand independent from, a passage or stimulus source. Items that operate independent of a stimulus are also known as “stand-alone MC.” Standalone items may still have tables, graphs, or other information used in support of the stem. ELA uses a mixture of MC items linked to a stimulus or passage and some that are standalone. For mathematics and science, all MC items are considered standalone.

**Sample:** Multiple Choice

Which statement **best** explains Earth's day and night cycle?

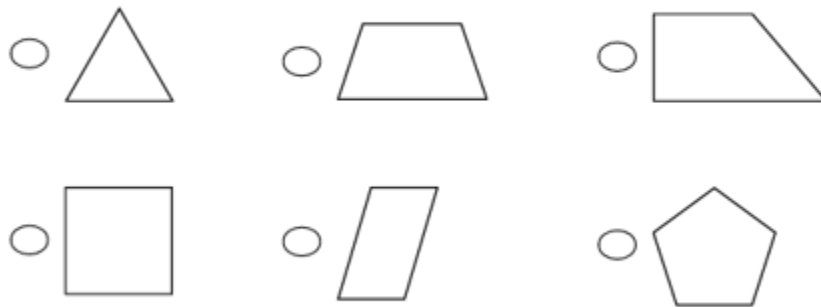
- (a) Earth rotates once each day on its axis.
- (b) Earth revolves around the Sun each year.
- (c) The Sun is closest to Earth during the day.
- (d) The tilt of Earth changes throughout the year.

### Multi-Select Items

Multi-Select items are autoscored items with more than one correct answer. Some MS items are similar to MC items but have two or more correct answers. Other MS items are multipart autoscored items, which may be varying combinations of multiple-choice (MC), multiple-response, enhanced selected response, gridded-response, completion or short-answer, and technology-enhanced items. ELA ESR gridded-response items appear in the print assessment only for grades 3-8.

#### **Sample One:** Enhanced Selected Response (ESR)

Sasha is designing a window. The window will be a shape that is a quadrilateral but not a rectangle. Select ALL the shapes that Sasha could choose.



**Sample Two:** Gridded Response (ELA paper-based print companion for MS items; grades 3-8 only)

Choose whether each event happens in "The Legend of the Black Fish," "Orca Rescue," or both passages. Record the answers in the answer bubbles.

EVENTS	1. Happens in "The Legend of the Black Fish"	2. Happens in "Orca Rescue"	3. Happens in Both Passages
a. Someone receives help from an animal.			
b. An animal shows thanks for receiving help.			
c. A saved animal splashes wildly in the water.			
d. An animal is in trouble.			

a. ① ② ③  
 b. ① ② ③  
 c. ① ② ③  
 d. ① ② ③

### Two-Part Evidence-Based Selected Response (EBSR)

The Evidence-Based Selected-Response items (EBSR) have two parts and are designed to elicit an evidence-based response, usually based on what a student has read in a stimulus passage. EBSR items are used only with the ELA assessment, and most EBSR items are linked to a stimulus passage or to a stimulus passage set. All two-part EBSR items have an Accuracy piece and an Evidence piece.

The Accuracy piece of the item is Part A. Part A of a typical EBSR item is similar to a standard MC test question. A student analyzes a stimulus and chooses a single correct answer from four answer choices. Part B of a typical EBSR item elicits evidence from the passage and requires that the student select one or more correct answers based on the response the student provided to Part A. Part B is also different from Part A in that it may have five or six answer options (rather than the four answer options typical of an MC item) and more than one option may be correct.

**Sample:** Evidence-Based Selected Response

This question has two parts. First, answer part A. Then, answer part B.

**Part A**

Which inference about the narrator in "An Amazing Day at the Aquarium" is supported by the passage?

- (a) The narrator wants to work at the aquarium.
- (b) The narrator goes on many field trips.
- (c) The narrator is eager to discover new information.
- (d) The narrator has been to the ocean before.

**Part B**

Which sentence from the passage **best** supports your answer in part A?

- (a) I couldn't believe what I was hearing: our class was going on a field trip to the City Aquarium!
- (b) Even when I was little, I was interested in all things aquatic.
- (c) There were other exhibits too.
- (d) Maybe I could make a difference by helping save our oceans.

## Text Dependent Analysis (TDA)

Text-Dependent Analysis (TDA) items will be used in the ELA assessment in grades 4–9. Unlike a writing prompt, the TDA item is a text-based analysis, based on a passage or a multiple- passage set that each student has read during the assessment. Both Literature and Informational Texts are addressed through this item type. Students must draw on basic writing skills while inferring and synthesizing information from the passage in order to develop a comprehensive, holistic essay response. The demand required of a student’s reading and writing skills in response to a TDA coincides with the similar demands required for a student to be college and career ready. A character count at the bottom tracks the students’ response length. Students will have access to a writer’s checklist to help guide them in their response. The TDA prompt will be scored using a holistic scoring guideline.

**Sample:** Text Dependent Analysis

Both passages tell about a different student taking a trip to an aquarium. Write an essay analyzing how the two passages are similar and how the two passages are different. Use evidence from **both** passages to support your essay.

0/5000

## Technology-Enhanced (TE) Items

Technology-Enhanced items are computer-delivered, selected-response (SR), and open-ended response test items that use enhancements to augment the user interface. While these item types share the same functional structure of traditional paper-and-pencil test questions, the expansive features and functions of a computer-based medium are meant to show the possibilities available for constructed-response items in print and online environments.

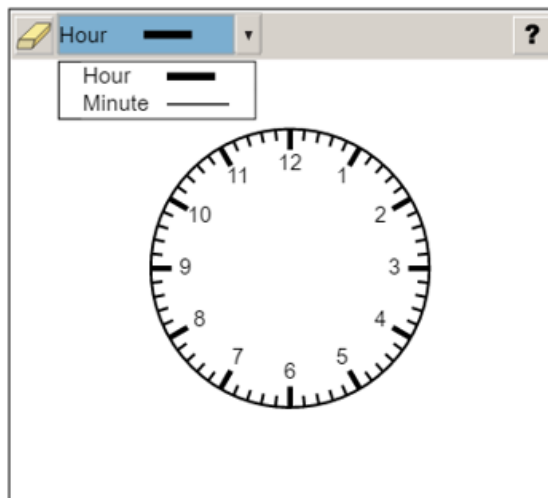
A wide variety of TE item types are available for use with DRC's online testing system, INSIGHT, including Clock Input, Angle Draw Input, Short Input or Short Answer, Bar Graph Input, Number Line Input, Coordinate Graph Input, Drag and Paste, Matching, and Highlighting Text.

### Clock Input

In a Clock Input item, a student is able to add hour and minute hands to the clock to answer questions involving time.

**Sample:** Clock Input

Marcus starts his math test at 9:15 a.m. His math test takes him 1 hour and 10 minutes to complete. Move the hands on the clock to show the time when Marcus finishes his math test.



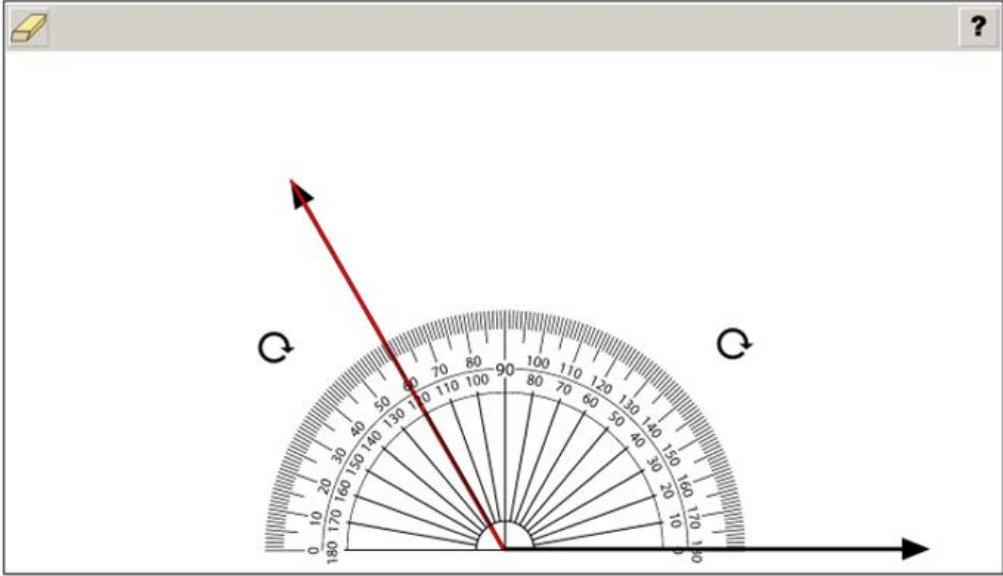


### Angle Draw Input

For Angle Draw input items, given a base line, the student can represent an angle.

**Sample:** Angle Draw Input

Leon is building a birdhouse with a roof angle of  $120^\circ$ . Rotate the red ray to make an angle of  $120^\circ$ .  
(Practice Hint: Select the Measurement Tools for the protractor. Rotate the red ray until you have the correct angle.)



### Short Input or Short Answer

Short Input or Short Answer items allow for many different type of inputs. The number of characters is usually limited to a relatively small number in order to facilitate autoscoring. The types of characters allowed can also be limited to text only, numbers only, or a mix. Certain short input items can also be used in paper-based assessments as a gridded-response item.

#### **Sample One:** Short Answer

Look at the function.

$$f(x) = -2x + 6$$

What is the value of  $f(3)$ ? Write your answer in the box below.

**Sample Two:** Gridded Response (Mathematics paper-based print companion for short input/short answer items)

Multiply.

$$22 \times 12$$

Enter your answer in the gridded response area.

	/	/	/	
*	*	*	*	*
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

### Bar Graph Input

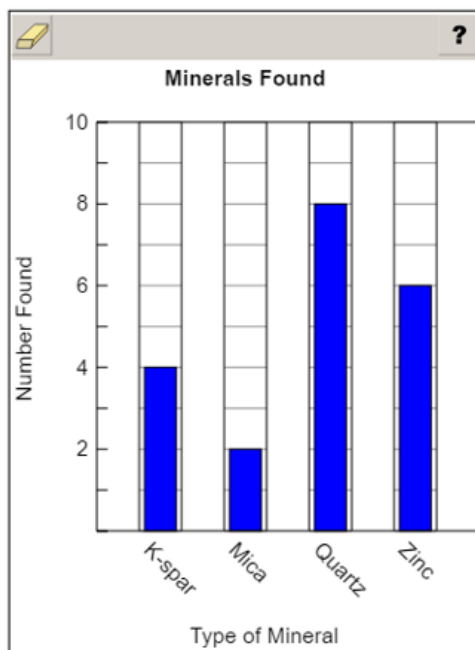
Bar Graph Input items allow for students to produce bar graphs, either with prepopulated titles, labels, and scales or without them. (The number of bars and the color of the bars is predetermined by the system. A reset feature is available that allows the student to start over from the original configuration.)

#### **Sample:** Bar Graph Input

Lars is finding different types of minerals. The table below shows how many minerals he finds.

Minerals Found	
Type of Mineral	Number Found
K-spar	4
Mica	2
Quartz	8
Zinc	6

Make a bar graph showing the total number of each kind of mineral Lars finds.



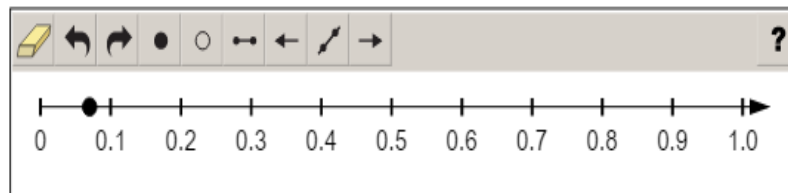
## Number Line Input

Number Line Input items allow for students to create a graph that might involve plotting points only or points and lines. Both solid and open “dots” are available, as well as line segments and rays. Number line graphs can have prepopulated titles, labels, and scales or can allow for the student to populate them.

### **Sample:** Number Line Input

Luke is reading a map. The map shows a library  $\frac{7}{100}$  kilometer from his home. Click on the number line to place a point at the distance, in kilometers, of the library from Luke's home. Then fill in the answer box with the decimal notation of the distance.

*(Practice Hint: Select the Closed Point tool on the top menu and then place the point on the number line.)*



kilometer

## Coordinate Graph Input


Coordinate Graph Input items allow for the graphing and labeling of points and lines. Regions, determined by plotted lines, can be shaded. Solid and open “dots,” as well as solid and dashed lines, are available to the student. Coordinate graphs can have prepopulated titles, labels, and scales or can allow the student to populate them.

### Sample: Coordinate Graph Input

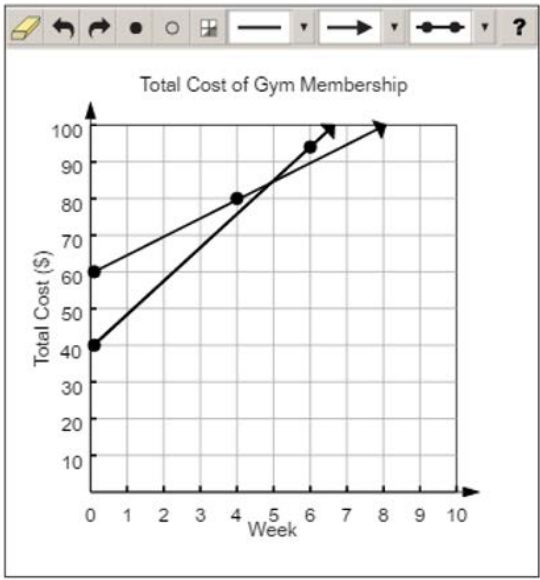
Annabelle is deciding which summer gym membership to purchase.

- Gym 1 charges \$60 to join and \$5 for each week.
- Gym 2 charges \$40 to join and \$9 for each week.

Graph lines to show the total cost of each gym on the coordinate plane. Plot a point on the graph where both gyms cost the same amount.

*(Practice Hint: Select the Line tool  from the drop-down menu to draw the lines on the grid. Select anywhere on the grid and then drag to another place on the grid to create each line.)*

*(Practice Hint: Select the Closed Point tool and plot the point.)*



### Line Plot Input

Line Plot Input items are used as another way to graphically represent data. The basic structure is provided for the student. Certain labeling on the line plot can be done by the student. A reset feature is available that allows the student to start over from the original configuration.

#### **Sample:** Line Plot Input

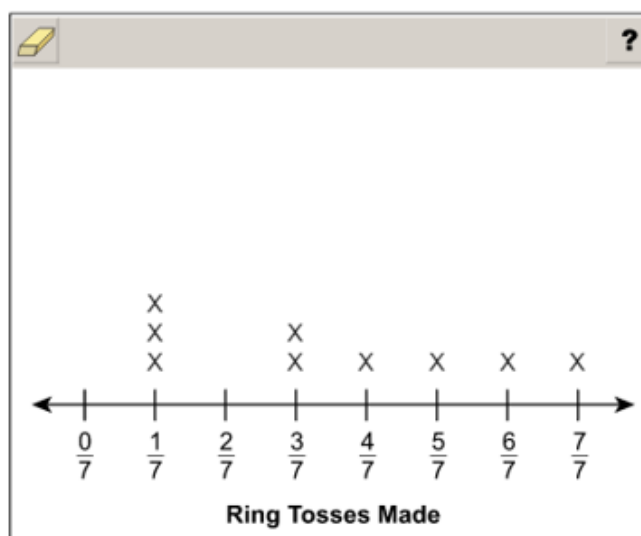
Callie has a ringtoss booth at a fair. She records the fraction of rings each person tosses that land on a bottle.

$$\frac{1}{7}, \frac{3}{7}, \frac{1}{7}, \frac{4}{7}, \frac{3}{7}, \frac{6}{7}, \frac{1}{7}, \frac{5}{7}, \frac{7}{7}$$

Record the results of the ring tosses on the line plot.

*(Practice Hint: Select above the fraction you want to record and an x will appear.)*

*(Practice Hint: Use the Highlighter tool to keep track of the fractions you have entered into the line plot.)*



### Drag and Drop Input


Drag and Drop Input items can be used in a wide variety of ways by requiring information to be moved into a specific area. The main difference between a Drag and Drop and a Drag and Paste is that a Drag and Drop allows each draggable entity to be used only once. A reset feature is available that allows the student to start over from the original configuration.

#### **Sample:** Drag and Drop Input

Read the sentences.

Choose the two words that **best** fill in the blanks.

Drag the words to the blanks.

?

My grandfather always told my brother and me that the two most important things in life are \_\_\_\_\_ and \_\_\_\_\_. He claimed that even though those two things can't be bought or sold, they can be valued by people every single day of their lives. He also said that those two ideals have brought him more joy and happiness than he ever could have imagined.

**pets      cars      honesty      toys      freedom      books**

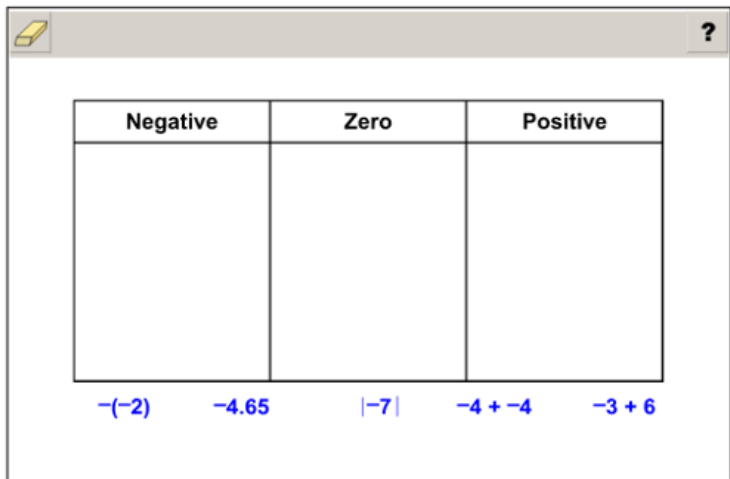


### Drag and Paste Input

Drag and Paste Input items can be used in a wide variety of ways. In contrast with a Drag and Drop, a Drag and Paste allows draggable entities to be used more than once. A reset feature is available that allows the student to start over from the original configuration.

**Sample:** Drag and Paste Input

Determine the value of each number or expression. Drag each number or expression into the correct box.



Negative	Zero	Positive

$-(2)$     $-4.65$     $|-7|$     $-4 + -4$     $-3 + 6$

### Drop-Down List Input

Drop Down List Input items enable the collection of information about a student's grasp of a concept with a single item. Students can be asked to choose from three function types, four number-of-real-zero responses, and two inverse function responses. For one function alone, this provides 24 possible answer combinations. With the three functions, a considerable amount of information can be gained, making this almost an open-ended item type.

**Sample:** Drop Down List Input (ELA)

Read the sentence. Choose the correct conjunctions from the drop-down menus.

While I like playing the guitar for my friends, I like  taking lessons on Saturday mornings when all my friends are still sleeping  practicing for a half hour every single day of the week.

- but also
- and
- nor
- or

### Pictograph using Drag and Paste

Pictograph using Drag and Paste is actually another example of drag and paste, but is worth mentioning on its own as it is a type of graphing often used at lower grade levels. The print version of this item type is a Draw item in which the student draws the lines indicated.

**Sample:** Drag and Paste

Kelsey has 12 dog treats for her 3 dogs. She will give the same number of treats to each dog. Separate the treats into equal groups by placing lines between them.

(Practice Hint: Drag the green lines on the side to separate the treats.)



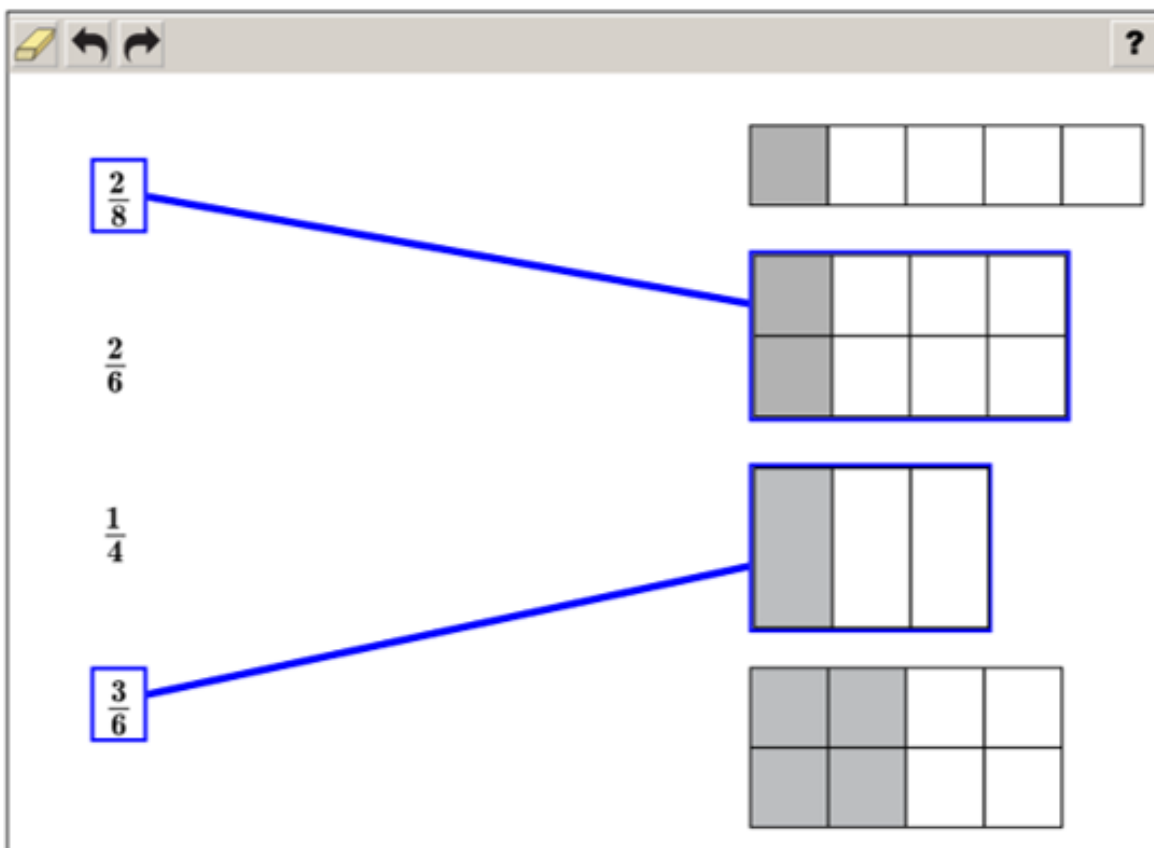
### Matching Input

Matching items allow for the use of text or graphics as the matching objects. The student clicks on one object and then clicks on a second object to connect them. In Table Match Interaction Items, students click the boxes to indicate the selection.

#### **Sample one:** Matching

Match each fraction below with the model or models showing an equal fraction of shaded bars.

(Practice Hint: Select a fraction on the left side and a blue box appears. Then select the match on the right side and a blue line connects them. Not all fraction models may have matches, and some may have more than one.)



The screenshot shows a software interface for a matching exercise. On the left, four fractions are listed in boxes:  $\frac{2}{8}$ ,  $\frac{2}{6}$ ,  $\frac{1}{4}$ , and  $\frac{3}{6}$ . On the right, there are four fraction models, each consisting of a grid of bars. The top model is a 1x5 grid with 1 bar shaded. The second model is a 2x4 grid with 2 bars shaded. The third model is a 1x3 grid with 1 bar shaded. The bottom model is a 2x4 grid with 4 bars shaded. Blue boxes highlight the  $\frac{2}{8}$  and  $\frac{3}{6}$  fractions. Blue lines connect the  $\frac{2}{8}$  fraction to the 2x4 grid with 2 bars shaded, and the  $\frac{3}{6}$  fraction to the 1x3 grid with 1 bar shaded. The interface also includes a toolbar with an eraser, undo, and redo button, and a question mark icon in the top right corner.

**Sample Two:** Table Match Interaction

The chart shows a summary of four events in Newton's life before he went to college and a number for each event's sequence. Match each event with the order it occurs by selecting the correct number. You will use each number only once.

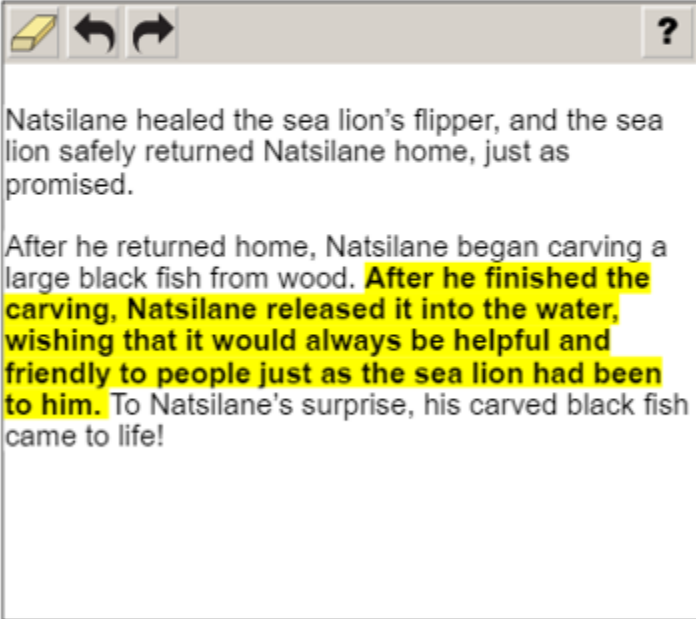
	1	2	3	4
Newton insisted on studying mathematics.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Newton was sent to live with his grandfather.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Newton was given responsibility for an estate.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Newton attended school for the first time.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### Highlighting Text

Highlighting Text items allow a word, phrase, sentence, or paragraph of a designated text to be highlighted;

**Sample:** Highlighting Text

Read the paragraphs from "The Legend of the Black Fish." Then, choose **two** sentences that show a central message of the passage.



The interface shows a text editor with a toolbar at the top containing a highlighter icon, left and right arrow icons, and a question mark icon. The text below is as follows:

Natsilane healed the sea lion's flipper, and the sea lion safely returned Natsilane home, just as promised.

After he returned home, Natsilane began carving a large black fish from wood. **After he finished the carving, Natsilane released it into the water, wishing that it would always be helpful and friendly to people just as the sea lion had been to him.** To Natsilane's surprise, his carved black fish came to life!

## Constructed Response (CR) Items

*Only used in Science for 2018.*

As the name suggests, Constructed-Response (CR) items differ from Selected-Response items in that the student must generate the content of their response to the problem or objective provided in the item rather than choosing the response from options supplied within the item. Like their MC counterparts, CR items may be linked to, or stand independent from, a stimulus source. CR items that operate independent of a stimulus are known as “standalone CR.” Standalone CR items may still have tables, graphs, or other information used in support of the question. Short CR items are designed to elicit brief written responses (a paragraph of three or four sentences or a series of very objective and concise answers of just a few characters) that are entered into small response boxes. No extemporaneous text/explanation/work is required. Extended CR items are designed to elicit an extended written response (three or four paragraphs, up to one page) or a mixture of a written text and short, concise answers placed in small response boxes.

### Sample: Constructed Response (Science only)

**This question is worth 2 points.**

A student recorded air temperatures on Monday and Tuesday.

Time	Monday	Tuesday
8:00 AM	45°F	50°F
9:00 AM	47°F	52°F
10:00 AM	48°F	53°F
11:00 AM	50°F	55°F
12:00 PM	52°F	57°F
1:00 PM	?	?

A. Describe a pattern in the student's recorded data.

0/500

B. Based on the pattern, predict the **most likely** air temperature at 1:00 PM for each day.

Monday:  °F

Tuesday:  °F